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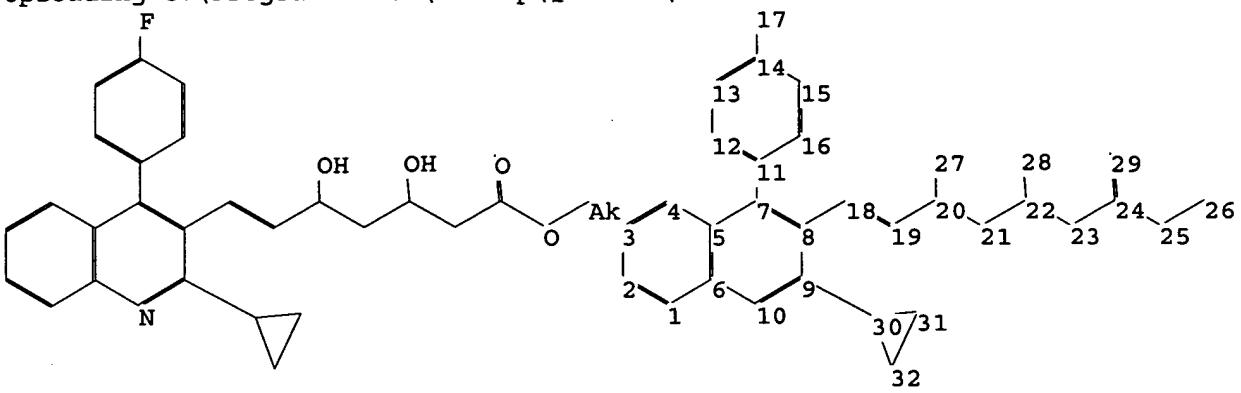


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chain nodes :
17  18  19  20  21  22  23  24  25  26  27  28  29
ring nodes :
1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  30  31  32
chain bonds :
7-11  8-18  9-30  14-17  18-19  19-20  20-21  20-27  21-22  22-23  22-28  23-24
24-25  24-29  25-26
ring bonds :
1-2  1-6  2-3  3-4  4-5  5-6  5-7  6-10  7-8  8-9  9-10  11-12  11-16  12-13  13-14
 14-15  15-16  30-31  30-32  31-32
exact/norm bonds :
20-27  22-28  24-25  24-29  25-26  30-31  30-32  31-32
exact bonds :
7-11  8-18  9-30  14-17  18-19  19-20  20-21  21-22  22-23  23-24
normalized bonds :
1-2  1-6  2-3  3-4  4-5  5-6  5-7  6-10  7-8  8-9  9-10  11-12  11-16  12-13  13-14
 14-15  15-16


Match level :
1:Atom  2:Atom  3:Atom  4:Atom  5:Atom  6:Atom  7:Atom  8:Atom  9:Atom  10:Atom
11:Atom  12:Atom  13:Atom  14:Atom  15:Atom  16:Atom  17:CLASS  18:CLASS  19:CLASS
20:CLASS  21:CLASS  22:CLASS  23:CLASS  24:CLASS  25:CLASS  26:CLASS  27:CLASS
28:CLASS  29:CLASS  30:Atom  31:Atom  32:Atom
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L1 STRUCTURE UPLOADED

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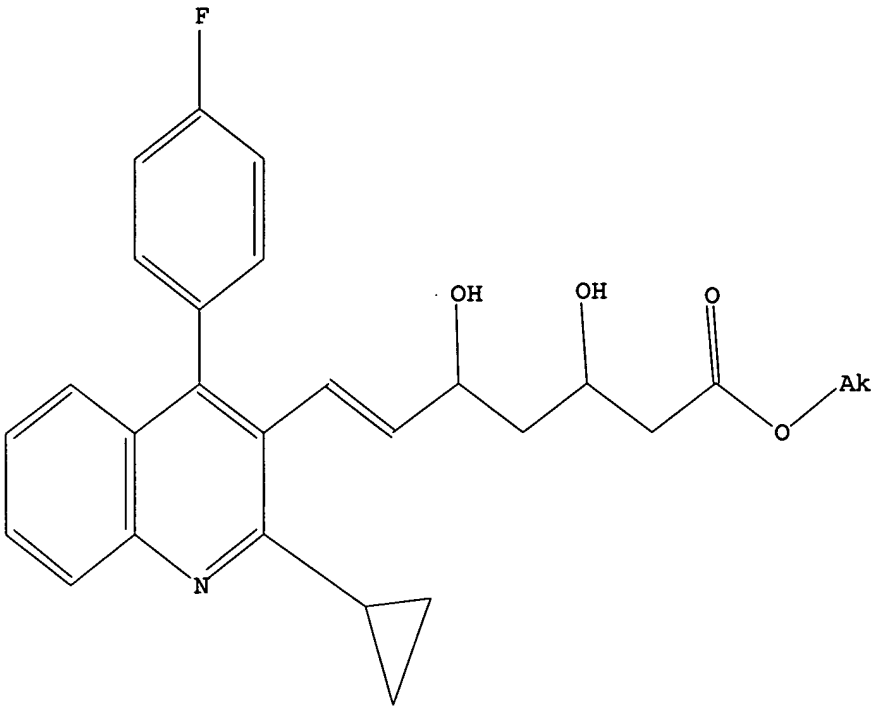
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1 full
L3 24 SEA SSS FUL L1

=> file ca

=> s l3
L4 32 L3

=> s liquid chromatograph?
651439 LIQUID
394430 CHROMATOGRAPH?
L5 83200 LIQUID CHROMATOGRAPH?
(LIQUID(W)CHROMATOGRAPH?)

=> s l4 and l5
L6 4 L4 AND L5

=> s l4 and resolv?
178031 RESOLV?
L7 3 L4 AND RESOLV?

=> s l6 or l7
L8 6 L6 OR L7

=> d ibib abs fhitstr 1-6

L8 ANSWER 1 OF 6 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 141:395429 CA
TITLE: Method for producing ethyl (3R,5S,6E)-7-[2-cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]-3,5-dihydroxy-6-heptenoate
INVENTOR(S): Onishi, Atsushi; Tachibana, Kozo
PATENT ASSIGNEE(S): Daicel Chemical Industries, Ltd., Japan; Nissan Chemical Industries, Ltd.
SOURCE: PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004094385	A1	20041104	WO 2004-JP5894	20040423
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1623978	A1	20060208	EP 2004-729193	20040423
R: CH, DE, FR, GB, IT, LI, IE				
PRIORITY APPLN. INFO.:			JP 2003-119807	A 20030424
			WO 2004-JP5894	W 20040423

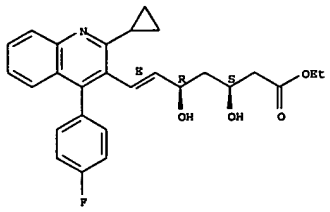
AB Disclosed is a method for producing Et (3R,5S,6E)-7-[2-cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]-3,5-dihydroxy-6-heptenoate (I) from a solution containing a mixture of optical isomers of Et (6E)-7-[2-cyclopropyl-4-(4-fluorophenyl)quinoline-3-yl]-3,5-dihydroxy-6-heptanoate by means of the liquid chromatog. using a packing material having a carrier and, carried thereon, a polysaccharide derivative, characterized in that a part or all of the hydrogen atoms of the hydroxyl groups and amino groups of the polysaccharide derivative are substituted with one or more substituents, such as a carbamoyl group wherein one hydrogen atom is substituted with an aromatic group having a specific alkyl group. The method allows the production of the above (3R,5S,6E)-isomer I with enhanced productivity compared to a conventional method. Thus, 100 g cellulose and 794 g 4-isopropylphenyl isocyanate were stirred in pyridine at reflux for 60 h to give 84.6% cellulose tris(4-isopropylcarbamate) (II) which (100 g) was dissolved in 600 mL acetone and added to 3-aminopropylated silica gel (400 g), followed

L8 ANSWER 1 OF 6 CA COPYRIGHT 2006 ACS on STN (Continued)
by evapn. of the solvent under reduced pressure to give II-supported on silica gel as a packing material. This packing material was packed in a stainless steel column (0.46 cm diam. × 25 cm length) by the slurry method to give a HPLC column. A mixt. of Et (3R,5S,6E)- and (3S,5R,6E)-7-[2-cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]-3,5-dihydroxy-6-heptenoate was sepd. by the HPLC column prepd. above using n-hexane/2-propanol (50/50 vol./vol. ratio) as the eluent at 40°.

IT 147008-20-6, Ethyl rel-(3R,5S,6E)-7-[2-Cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]-3,5-dihydroxy-6-heptenoate
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(method for producing Et (3R,5S,6E)-7-[2-cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]-3,5-dihydroxy-6-heptenoate by liquid chromatog. separation using polysaccharide carbamate derivative supported on silica gel)

RN 147008-20-6 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, ethyl ester, (3R,5S,6E)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.
Double bond geometry as shown.

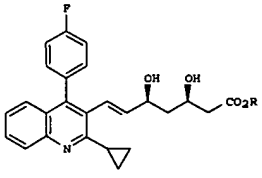


REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 6 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 140:287282 CA
TITLE: Purification of a 3,5-dihydroxy-6-heptenoate isomer
INVENTOR(S): Yoshimura, Yuji; Yasukawa, Masami; Morikiyo, Syuji; Matsumoto, Hiroo; Takada, Yasutaka; Adachi, Michiaki
PATENT ASSIGNEE(S): Nissan Chemical Industries, Ltd., Japan
SOURCE: PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004026838	A1	20040401	WO 2003-JP11643	20030911
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2499335	AA	20040401	CA 2003-2499335	20030911
AU 2003260963	A1	20040408	AU 2003-260963	20030911
EP 1539698	A1	20050615	EP 2003-797579	20030911
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2006500405	T2	20060105	JP 2004-537553	20030911
PRIORITY APPLN. INFO.:			JP 2002-275015	A 20020920
			WO 2003-JP11643	W 20030911

OTHER SOURCE(S): MARPAT 140:287282
GI



I

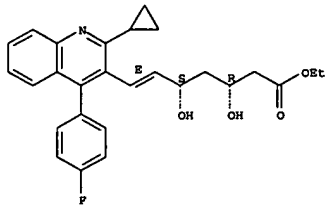
AB An alkyl (3R,5S)-7-[2-cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]-3,5-dihydroxy-6-heptenoate I [R = alkyl], which is an intermediate for a cholesterol-reducing agent (a HMG-CoA reductase inhibitor), is purified

L8 ANSWER 2 OF 6 CA COPYRIGHT 2006 ACS on STN (Continued)
liq. chromatog. on silica gel.

IT 167073-19-0P
RL: PUR (Purification or recovery); PREP (Preparation)
(purification of a 3,5-dihydroxy-6-heptenoate isomer)

RN 167073-19-0 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, ethyl ester, (3R,5S,6E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

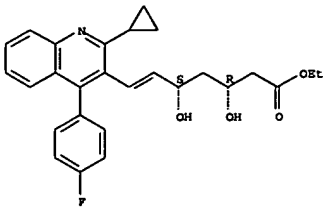
L8 ANSWER 3 OF 6 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 138:287535 CA
TITLE: Process for preparation of optically active 7-[2-cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]-3,5-dihydroxyhept-6-enoic acid ethyl ester
INVENTOR(S): Nishino, Shigeyoshi; Matsushita, Akio; Yokoyama, Shuji; Kawachi, Yasuhiro; Sasaki, Hiroshi
PATENT ASSIGNEE(S): UBE Industries, Ltd., Japan
SOURCE: PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003027073	A1	20030403	WO 2002-JP9638	20020919
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2005255522	A2	20050922	JP 2001-284633	20010919
JP 2005255523	A2	20050922	JP 2001-284634	20010919
PRIORITY APPLN. INFO.:			JP 2001-284633 A	20010919
			JP 2001-284634 A	20010919

AB This invention pertains to prepn method of (3R,5S)-7-[2-cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]-3,5-dihydroxyhept-6-enoic acid Et ester useful as an intermediate for an HMG-CoA reductase inhibitor (cholesterol-lowering agent) in high yield by reacting an amine salt of (3R,5S)-7-[2-cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]-3,5-dihydroxyhept-6-enoic acid with an alc. in a solvent in the presence of an acid, or by a method comprising reacting the salt with an esterifying agent in a solvent in the presence of a base. For example, 7-[2-cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]-3,5-dihydroxyhept-6-enoic acid was reacted with PhCH2NH2 in AcOEt to obtain 7-[2-cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]-3,5-dihydroxyhept-6-enoic acid benzylamine salt (94.9%). The above salt was resolved with THF to give (3R,5S)-7-[2-cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]-3,5-dihydroxyhept-6-enoic acid benzylamine salt (60.0%, 99.1% ee, 99.8% de). The above optically active salt was reacted with EtOH in the presence of concentrated aqueous HCl to afford (3R,5S)-7-[2-cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]-3,5-dihydroxyhept-6-enoic acid Et ester

L8 ANSWER 3 OF 6 CA COPYRIGHT 2006 ACS on STN (Continued)
(100%), which was crystd. from (i-Pr)2O and heptane to produce cryst. sample (91.0%, 99.9% ee, 99.8% de).
IT 172336-32-2P
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(process for preparation of optically active 7-[2-cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]-3,5-dihydroxyhept-6-enoic acid Et ester)
RN 172336-32-2 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, ethyl ester, (3R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
Double bond geometry unknown.



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 6 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 137:384764 CA
TITLE: Process for producing (3R,5S)-7-substituted-3,5-dihydroxyhept-6-enoic acid
INVENTOR(S): Nishino, Shigeyoshi; Yokoyama, Shuji; Kawachi, Yasuhiro; Sasaki, Hiroshi
PATENT ASSIGNEE(S): Ube Industries, Ltd., Japan
SOURCE: PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

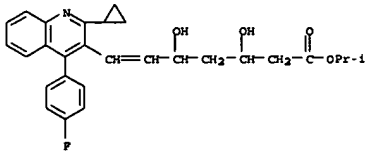
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002092570	A1	20021121	WO 2002-JP4710	20020515
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2005047803	A2	20050224	JP 2001-145358	20010515
PRIORITY APPLN. INFO.:			JP 2001-145358 A	20010515

OTHER SOURCE(S): MARPAT 137:384764
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Disclosed is a process for producing a (3R,5S)-7-[2-cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]-3,5-dihydroxyhept-6-enoic acid represented by the formula (I) which comprises optically resolving with an achiral amine compound a mixture of optical isomers of a 7-[2-cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]-3,5-dihydroxyhept-6-enoic acid represented by the formula (II). The optical resolution involves contacting II with an achiral amine to form II achiral amine salt, recrystg. the salt to form I achiral amine salt, and contacting the I achiral recrystn. amine salt with an acid to give I. This process does not use expensive chiral amines and is suitable for industrial preparation of I which is an intermediate for an anticholesteremic agent (HMG-CoA reductase inhibitor). Thus, 4.21 g II (preparation given), 1.07 g benzylamine, and 30 mL EtOAc were added to a 50 mL flask and cooled to 0° with stirring, upon which crystals precipitated The precipitated crystals were filtered, washed with EtOAc cooled at 0°, and dried under reduced pressure to give 94.9% II benzylamine salt. II benzylamine salt (4.22 g) and 84 mL THF were added to a 100 mL flask, warmed to 50° with stirring to give a homogeneous solution, and cooled to 0°, upon which crystals precipitated The precipitated crystals were

L8 ANSWER 4 OF 6 CA COPYRIGHT 2006 ACS on STN (Continued)
and washed with 42 mL THF cooled at 0°. This procedure was repeated twice to give 2.52 g I benzyl amine salt (60.0%) which (2.11 g) and 10 mL MeOH were added to a 50 mL flask, adjusted to pH 3.5 by adding 1 M aq. HCl, and extd. with 10 mL EtOAc twice, followed by drying the EtOAc ext. over anhyd. MgSO4 and concn. to give 1.66 g I (99.0%).
IT 475645-78-4P, 7-[2-Cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]-3,5-dihydroxyhept-6-enoic acid isopropyl ester
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of (3R,5S)-7-[2-cyclopropyl-4-(4-fluorophenyl)-quinolin-3-yl]-3,5-dihydroxyhept-6-enoic acid by optical resolution using achiral amine via formation of achiral amine salt, recrystn., and treatment with acid)
RN 475645-78-4 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, 1-methylethyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 5 OF 6 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 136:325435 CA
TITLE: Process for producing optically active ethyl (3R,5S,6E)-7-[2-cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]-3,5-dihydroxy-6-heptenoate
INVENTOR(S): Onishi, Atsushi; Murazumi, Koichi; Tachibana, Kozo
PATENT ASSIGNEE(S): Daicel Chemical Industries, Ltd., Japan; Nissan Chemical Industries, Ltd.
SOURCE: PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002030903	A1	20020418	WO 2001-JP9000	20011012
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2001095926	A5	20020422	AU 2001-95926	20011012
EP 1334967	A1	20030813	EP 2001-976679	20011012
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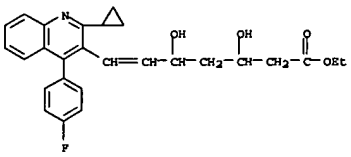
US 2005075502	A1	20050407	US 2003-398915	20030709
US 6946557	B2	20050920		
PRIORITY APPLN. INFO.:			JP 2000-314245 A	20001013
			WO 2001-JP9000 W	20011012

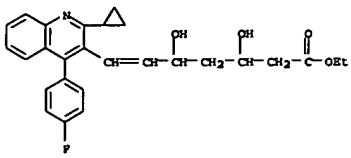
AB The process for producing an optically active isomer of Et 7-[2-cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]-3,5-dihydroxy-6-heptenoate comprises optically resolving, at a high efficiency, a mixture of optical isomers of the compound, characterized in that a packing comprising a support and cellulose tris(4-chlorophenylcarbamate) deposited thereon in a specific proportion is used to chromatog. isolate the target isomer under such conditions as to result in a specific retention volume The title compound is an intermediate for the known hypolipemic NK 104.
IT 121661-13-0
RL: ANT (Analyte); ANST (Analytical study)
(process for producing optically active Et (3R,5S,6E)-7-[2-cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]-3,5-dihydroxy-6-heptenoate)
RN 121661-13-0 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, ethyl ester (9CI) (CA INDEX NAME)

L8 ANSWER 6 OF 6 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 130:316585 CA
TITLE: Chiral separation of a pharmaceutical intermediate by a simulated moving bed process
AUTHOR(S): Nagamatsu, S.; Murazumi, K.; Makino, S.
CORPORATE SOURCE: Daicel Chemical Ind., Chiyoda-ku, Tokyo, 100, Japan
SOURCE: Journal of Chromatography, A (1999), 832(1 + 2), 55-65
CODEN: JCRAEY; ISSN: 0021-9673
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The chiral separation of a pharmaceutical intermediate by a simulated moving bed (SMB) system on a pilot-scale is described. The operating conditions were chosen from results simulated by the software, help, developed by Novasep, based upon data from a single column. The productivity of the SMB system is tested by the separation of an ester of quinoline mevalonic acid at various internal flow-rates. The eluent consumption is also discussed. The step time to switch the ports to enter or withdraw solns. is one of important factors influencing the productivity.
IT 121661-13-0P, DOLE
RL: ANT (Analyte); PUR (Purification or recovery); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(chiral separation of pharmaceutical intermediate by simulated moving bed process)
RN 121661-13-0 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, ethyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 5 OF 6 CA COPYRIGHT 2006 ACS on STN (Continued)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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=> s l4 not l8
L9          26 L4 NOT L8

=> d ibib abs fhitstr 1-26
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L9 ANSWER 1 OF 26 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 143:139169 CA
TITLE: Preparation of crystal form of pitavastatin calcium
INVENTOR(S): Ohara, Yoshio; Takada, Yasutaka; Matsumoto, Hiroo; Yoshida, Akihiro
PATENT ASSIGNEE(S): Nissan Chemical Industries, Ltd., Japan
SOURCE: PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005063711	A1	20050714	WO 2004-JP19451	20041217
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

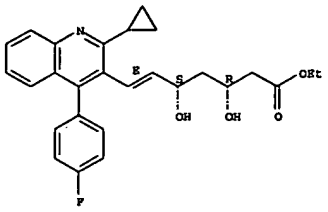
PRIORITY APPLN. INFO.: JP 2003-431788 A 20031226

AB A method for producing a drug substance of crystalline pitavastatin calcium excellent in stability, is presented. In the production of a compound (pitavastatin calcium) the water content is adjusted to a level of 5-15%, and the crystal form is controlled to be crystal form A, thereby to obtain the drug excellent in stability.

IT 167073-19-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of crystal form of pitavastatin calcium)
RN 167073-19-0 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, ethyl ester, (3R,5S,6E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

L9 ANSWER 1 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)



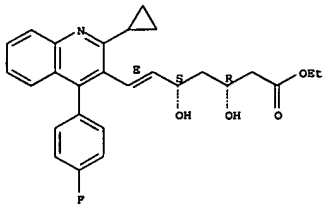
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 26 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 142:481922 CA
TITLE: Asymmetric reduction using biocatalytic reactions
AUTHOR(S): Okano, Kazuya; Ueda, Makoto
CORPORATE SOURCE: API Business Division, API Corporation, Japan
SOURCE: Specialty Chemicals Magazine (2004), 24(11), 40-41
CODEN: SPCHEY; ISSN: 0262-2262
PUBLISHER: DMG World Media (uk) Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB An enzyme expressed in a recombinant microorganism exhibited activity for the preparation of Pitavastatin Et ester by diastereoselective reduction of the 3-keto-5-hydroxy and double enantioselective reduction of the 3,5-diketo ester precursors.

IT 167073-19-0P, Pitavastatin ethyl ester
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(asym. reduction using biocatalytic reactions)
RN 167073-19-0 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, ethyl ester, (3R,5S,6E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



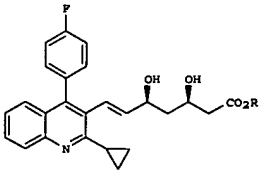
REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 26 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 142:392305 CA
TITLE: A process for producing high-purity 3,5-dihydroxy-6-heptenoic acid derivatives, useful as medicinal intermediates
INVENTOR(S): Yoshimura, Yuji; Yasukawa, Masami; Morikiyo, Syuji; Takada, Yasutaka; Matsumoto, Hiroo
PATENT ASSIGNEE(S): Nissan Chemical Industries, Ltd., Japan
SOURCE: PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005033083	A1	20050414	WO 2004-JP14289	20040922
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: JP 2003-346019 A 20031003

OTHER SOURCE(S): MARPAT 142:392305
GI

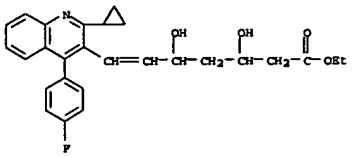


I

AB The invention relates to a process for producing a high-purity 3,5-dihydroxy-6-heptenoic acid derivs. of formula I (R is alkyl). An alc.-containing solvent was employed in a process for obtaining an optically active isomer by optical resolution

IT 121661-13-0P, DOLE
RL: PUR (Purification or recovery); PREP (Preparation)
(process for producing high-purity 3,5-dihydroxy-6-heptenoic acid

L9 ANSWER 3 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)
derivs. useful as medicinal intermediates)
RN 121661-13-0 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, ethyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

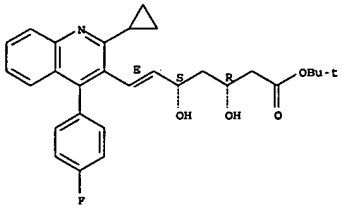
L9 ANSWER 4 OF 26 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 141:230683 CA
TITLE: Crystalline forms of pitavastatin calcium
INVENTOR(S): Van Der Schaaf, Paul Adriaan; Blatter, Fritz; Szelagiewicz, Martin; Schoening, Kai-Uwe
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.
SOURCE: PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004072040	A1	20040826	WO 2004-EP50066	20040202
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2513837	AA	20040826	CA 2004-2513837	20040202
EP 1592668	A1	20051109	EP 2004-707232	20040202
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
PRIORITY APPLN. INFO.:			EP 2003-405080	A 20030212
			WO 2004-EP50066	W 20040202

AB The present invention is directed to new crystalline forms of Pitavastatin
hemicalcium salt, referred to hereinafter as polymorphic Forms A, B, C, D,
E and F, as well as the amorphous form. Furthermore, the present invention is directed to processes for the preparation of these crystalline forms
and the amorphous form and pharmaceutical compns. comprising these crystalline
forms or the amorphous form. The hemicalcium salt was prepared from pitavastatin tert-Bu ester in tert-Bu ether and MeOH, NaOH added, and aqueous
phase extracted with Me tert-Bu ether. Then CaCl2 was added to give a form A.
IT 586966-54-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(crystalline forms of pitavastatin calcium)
RN 586966-54-3 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, 1,1-dimethylethyl ester, (3R,5S,6E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

L9 ANSWER 4 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)



L9 ANSWER 5 OF 26 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 140:41958 CA
TITLE: Process for the manufacture of organic compounds
INVENTOR(S): Storz, Thomas
PATENT ASSIGNEE(S): Novartis AG, USA
SOURCE: U.S. Pat. Appl. Publ., 17 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003233001	A1	20031218	US 2003-428257	20030502
US 6909003	B2	20050621		
PRIORITY APPLN. INFO.:			GB 2002-10234	A 20020503

OTHER SOURCE(S): MARPAT 140:41958
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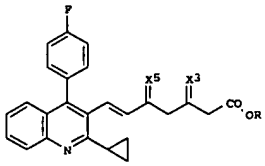
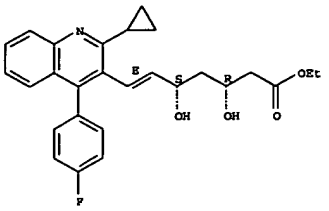


I

AB This invention relates to a process for the manufacture of analogs, (3R,5R)-R1(CH2)2CH(OH)CH2CH(OH)CH2CO2H and (3R,5S,6E)-R1CH:CHCH(OH)CH2CH(OH)CH2CO2H [R1 = cyclic statin analog residue], of known HMG-CoA reductase inhibiting statins via an enantioselective reduction
using a ruthenium catalyst. Thus, pitavastatin hemicalcium salt (3R,5S,6E)-I (R = 1/2Ca2+, X3 = X5 = β-OH-α-H) was prepared via enantioselective reduction of 3,5-dioxo-ester (6E)-I (R = Et, X3 = X5 = O)
catalyzed by (1R,2R)-N-p-toluenesulfonyl-1,2-diphenylethylenediamine-RuII-p-cymene complex in DMF followed by treatment with Et3N to give 3,5-diol-ester (3R,5S,6E)-I (R = Et, X3 = X5 = β-OH-α-H) which was subsequently converted to the target hemicalcium salt.
IT 167073-19-0P
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(process for asym. synthesis of analogs of statins via enantioselective
reduction using a ruthenium catalyst)
RN 167073-19-0 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, ethyl ester, (3R,5S,6E)- (9CI) (CA INDEX NAME)

L9 ANSWER 5 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)

Absolute stereochemistry.
Double bond geometry as shown.



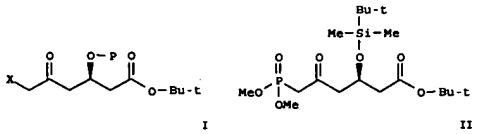
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L9 ANSWER 6 OF 26 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 139:337984 CA
TITLE: Preparation of rosuvastatin and related HMG-CoA reductase inhibitors via a common chiral intermediate
INVENTOR(S): Lim, Kwang-Min
PATENT ASSIGNEE(S): CLS Laboratories, Inc., S. Korea
SOURCE: PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003087112	A1	20031023	WO 2003-KR707	20030409
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
KR 2003080620	A	20031017	KR 2002-19340	20020409
AU 2003219592	A1	20031027	AU 2003-219592	20030409
PRIORITY APPLN. INFO.:			KR 2002-19340 A	20020409
			WO 2003-KR707 W	20030409

OTHER SOURCE(S): CASREACT 139:337984; MARPAT 139:337984
GI

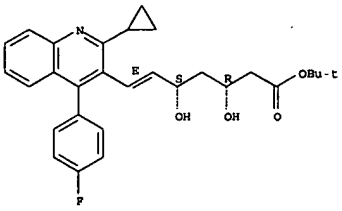


I II

AB A process for the preparation of rosuvastatin and related HMG-CoA reductase
inhibitors via the common chiral intermediate I [X = P(=O)R12, S(O)R1; R1 = H, alkyl, aryl; P = OH protecting group, e.g., t-butyldimethylsilyl] was
disclosed. For example, condensation of Et tert-Bu (3R)-3-hydroxyglutaric

L9 ANSWER 6 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)
acid, e.g., prepd. from diethyl-3-hydroxyglutaric acid in 3-steps, and the
sodium salt of di-Me methylphosphonate afforded claimed chiral phosphonate
II in 77% yield and 99.1% chiral purity. Of note is the enantioselective esterase mediated hydroylsis of diethyl-3-hydroxyglutaric acid in 99.5% chiral purity. The prepn. of the sodium salt of rosuvastatin using chiral
phosphonate II was also provided. The present invention does not have the
problem of removing reaction byproducts and the disposal of waste assocd. with current methodologies.
IT 586966-54-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of rosuvastatin and related HMG-CoA reductase
inhibitors via a common chiral intermediate)
RN 586966-54-3 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, 1,1-dimethylethyl ester, (3R,5S,6E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



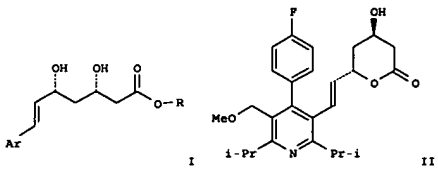
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

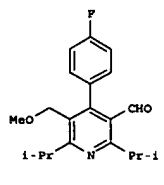
L9 ANSWER 7 OF 26 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 139:323335 CA
TITLE: Preparation of aromatic aldehydes via the ozonolysis of aromatic alkenes
INVENTOR(S): Antons, Stefan; Rehse, Joachim; Diehl, Herbert; Laue, Christian
PATENT ASSIGNEE(S): Bayer Aktiengesellschaft, Germany
SOURCE: Eur. Pat. Appl., 30 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1354865	A1	20031022	EP 2003-8308	20030410
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
DE 10216967	A1	20031113	DE 2002-10216967	20020416
US 2003232989	A1	20031218	US 2003-413199	20030414
JP 2003335756	A2	20031128	JP 2003-112036	20030416
PRIORITY APPLN. INFO.:			DE 2002-10216967 A	20020416

OTHER SOURCE(S): CASREACT 139:323335; MARPAT 139:323335
GI



I II

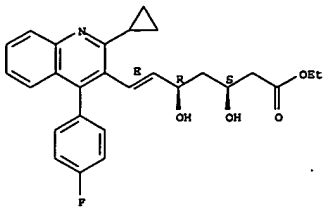


III

AB Preparation of aromatic aldehydes (Ar-CHO) via ozonolysis of aromatic alkenes I or

L9 ANSWER 7 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)
the corresponding lactone [Ar = (un)substituted aryl, heteroaryl; R = H, alkyl, cycloalkyl, etc.] is disclosed. For example, ozonolysis of lactone
II in methanol afforded aldehyde III in 83% yield. The process is claimed
useful for the recycling of HMG-CoA reductase inhibitors unwanted, i.e, false (mic), diastereomers.
IT 147008-20-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of aromatic aldehydes via the ozonolysis of aromatic alkenes)
RN 147008-20-6 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, ethyl ester, (3R,5S,6E)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.
Double bond geometry as shown.



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 8 OF 26 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 139:272910 CA
TITLE: Ogataea minuta carbonyl reductase, encoding gene, and use for producing optically active alcohols
INVENTOR(S): Hiraoka, Hirotoshi; Ueda, Makoto; Hara, Mari
PATENT ASSIGNEE(S): Mitsubishi Chemical Corporation, Japan; Nissan Chemical Industries, Ltd.
SOURCE: PCT Int. Appl., 54 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003078634	A1	20030925	WO 2003-JP3262	20030318
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2479705	AA	20030925	CA 2003-2479705	20030318
AU 2003221082	A1	20030929	AU 2003-221082	20030318
JP 2003339387	A2	20031202	JP 2003-74017	20030318
EP 1491633	A1	20041229	EP 2003-712750	20030318
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
US 2005048633	A1	20050303	US 2004-943202	20040917

PRIORITY APPLN. INFO.: JP 2002-75921 A 20020319
WO 2003-JP3262 W 20030318

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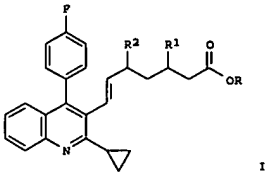
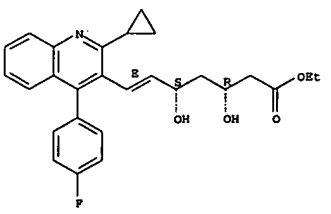


I

L9 ANSWER 8 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)
AB Provide a novel carbonyl reductase originating in a microorganism belonging to the genus Ogataea, an encoding gene, recombinant expression, and use for producing optically active alcs. By reducing ketones having general structures I (R = H, alkyl, aryl; R1 = :O, OH, (R)-OH; R2 = OH, (S)-OH, :O) with the use of carbonyl reductase, optically active alcs., in
particular, (3R,5S)-(E)-7-[2-cyclopropyl-4-(4-fluorophenyl)-quinolin-3-yl]-3,5-dihydroxy-hept-6-enoic acid esters, can be produced. A novel carbonyl
reductase was isolated from Ogataea minuta var. nonfermentans strain IFO 1473. Its substrate specificity was investigated with various ketones and
aldehydes. Its activity for reduction of 2,2,2-Trifluoroacetophenone was significantly inhibited by Hg(I) ion and Zn(II) ion. Its gene was cloned,
sequenced, and expressed in E. coli. The recombinant enzyme was used in production of.
(3R,5S)-(E)-7-[2-cyclopropyl-4-(4-fluorophenyl)-quinolin-3-yl]-3,5-dihydroxy-hept-6-enoic acid Et ester (3R,5S-DOLE) from (E)-7-[2-cyclopropyl-4-(4-fluorophenyl)-quinolin-3-yl]-3,5-dioxo-hept-6-enoic acid Et ester (DOXE) or 5S-(E)-7-[2-cyclopropyl-4-(fluorophenyl)-quinolin-3-yl]-5-hydroxy-3-oxohepto-6-enoic acid Et ester (5S-MOLE), is described. The yield was 319 μg (31.9% with 100% e.e. optical purity), and 807 μg (80.7% with 97% e.e. optical purity), resp.
IT 167073-19-0P, (3R,5S)-(E)-7-[2-Cyclopropyl-4-(4-fluorophenyl)-quinolin-3-yl]-3,5-dihydroxy-hept-6-enoic acid ethyl ester
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(Ogataea minuta carbonyl reductase, encoding gene, and use for producing optically active alcs.)
RN 167073-19-0 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, ethyl ester, (3R,5S,6E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



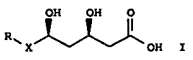
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 8 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)

L9 ANSWER 9 OF 26 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 139:214343 CA
TITLE: Process for the manufacture of HMG-CoA reductase inhibitory mevalonic acid derivatives
INVENTOR(S): Sedelmeier, Gottfried; Mathes, Christian
PATENT ASSIGNEE(S): Novartis A.-G., Switz.; Novartis Pharma G.m.b.H.
SOURCE: PCT Int. Appl., 44 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003070717	A1	20030828	WO 2003-EP1738	20030220
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LT, LU, LV, MA, MD, MK, MN, MX, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SE, SG, SK, TJ, TM, TN, TR, TT, UA, US, UZ, VC, VN, YU, ZA, ZW				
RW: AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR				
CA 2473075	AA	20030823	CA 2003-2473075	20030220
AU 2003218994	A1	20030909	AU 2003-218994	20030220
EP 1478640	A1	20041124	EP 2003-714750	20030220
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR 2003007801	A	20041221	BR 2003-7801	20030220
JP 2005520818	T2	20050714	JP 2003-569624	20030220
US 2005159480	A1	20050721	US 2003-504655	20030220
ZA 2004005436	A	20050617	ZA 2004-5436	20040708
NO 2004003919	A	20040920	NO 2004-3919	20040920
PRIORITY APPLN. INFO.:			GB 2002-4129 A	20020221
			WO 2003-EP1738 W	20030220

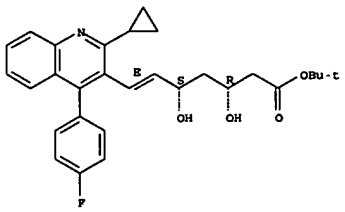
OTHER SOURCE(S): MARPAT 139:214343
GI



AB Mevalonic acid derivs. I [R = cyclic residue; X = CH2CH2, CH:CH] are prepared by treating R1R2R3P:CHCOCH2CO2R4 [R1-R3 = (un)substituted Ph; R4 = aliphatic, cycloaliph., aromatic] with RCHO, reducing the resulting RCH:CHCOCH2CO2R4 in presence of a chiral metal BINAP or TsDPEN catalyst, treating the resulting alc. with an ester enolate, reducing the second oxo

L9 ANSWER 9 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)
group, and hydrolyzing the ester group. Thus, ClCH2COCH2CO2Et was treated with PPh3 to give Ph3P:CHCOCH2CO2Et which was treated with 2-cyclopropyl-4-(4-fluorophenyl)quinoline-3-carboxaldehyde to give (E)-5-[2-cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]-3-oxopent-4-enoic acid Et ester. This ester was reduced with Ru[(1R,2R)-p-TsNCHPhCHPhNH](η-p-cymene) and treated with Me3COAc to give (E)-(S)-7-[2-cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]-5-hydroxy-3-oxohept-4-enoic acid tert.-Bu ester which was reduced with MeOBEt2 and hydrolyzed to give (E)-(3R,5S)-7-[2-cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]-3,5-dihydroxyhept-4-enoic acid calcium salt.
IT 586966-54-3P
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(process for the manufacture of HMG-CoA reductase inhibitory mevalonic acid derivs.)
RN 586966-54-3 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, 1,1-dimethylethyl ester, (3R,5S,6E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 10 OF 26 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 139:164712 CA
TITLE: Asymmetric titanium mediated disilyloxydiene/aldehyde addition process for the preparation of δ-hydroxy-β-ketoesters.
INVENTOR(S): Chen, Guang-Pei; Kapa, Prasad Koteswara; Loeser, Eric M.; Beutler, Ulrich; Zaugg, Werner; Girgis, Michael J.
PATENT ASSIGNEE(S): Novartis A.-G., Switz.; Novartis Pharma G.m.b.H.
SOURCE: PCT Int. Appl., 53 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003064382	A2	20030807	WO 2003-EP804	20030127
WO 2003064382	A3	20031211		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LT, LU, LV, MA, MD, MK, MN, MX, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SE, SG, SK, TJ, TM, TN, TR, TT, UA, US, UZ, VC, VN, YU, ZA, ZW				
RW: AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR				
US 2003208072	A1	20031106	US 2003-350615	20030124
US 6835838	B2	20041228		
CA 2472340	AA	20030807	CA 2003-2472340	20030127
EP 1472227	A2	20041103	EP 2003-734696	20030127
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR 2003007236	A	20041207	BR 2003-7236	20030127
JP 2005516064	T2	20050602	JP 2003-564005	20030127
ZA 2004005239	A	20050617	ZA 2004-5239	20040701
US 2004249154	A1	20041209	US 2004-891357	20040714
NO 2004003586	A	20041007	NO 2004-3586	20040827
PRIORITY APPLN. INFO.:			US 2002-352316P P	20020128
			US 2002-383188P P	20020524
			US 2003-350615 A3	20030124
			WO 2003-EP804 W	20030127

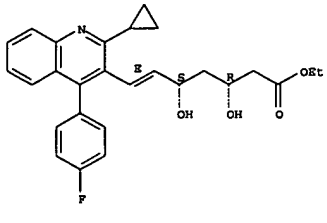
OTHER SOURCE(S): CASREACT 139:164712; MARPAT 139:164712
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A process for the preparation of I [R1 = (un)substituted (cyclo)alkyl, aralkyl; R2-7 = H, halo, OH, (un)substituted (cyclo)alkyl, aryl, aralkyl, etc.] and analogs is disclosed. The process involves the Ti(OPr-i)4/(S)-BINOL

L9 ANSWER 10 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)
mediated addn. of II [R1 = as above; R, R' = alkyl] to III [R2-7 = as above]. For instance, II [R1 = Et; R, R' = Me] (prepn. given) is reacted with III [R2 = F; R3-7 = H] (THF, 4Å mol. sieves, (S)-BINOL/Ti(OPr-i)4, 19°, 2 days) to give I [R1 = Et; R2 = F; R3-7 = H] in 81.6% yield (after purifn.) and the amt. of undesired enantiomer was below the limit of detection. Addnl. examples demonstrated sidechain manipulation (to the δ(S)-β(R)-ester) and subsequent conversion to pitavastatin (calcium salt) via the intermediacy of the 2H-pyranone. Exptl. details regarding mol. sieve prepn. and their use in a fixed bed reactor are given.
IT 167073-19-0P
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(asym. titanium mediated disilyloxydiene/aldehyde addition process for preparation of δ-hydroxy-β-ketoesters)
RN 167073-19-0 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, ethyl ester, (3R,5S,6E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L9 ANSWER 11 OF 26 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 138:204870 CA
TITLE: Processes for preparing calcium salt forms of statins
INVENTOR(S): Niddam-Hildesheim, Valerie; Lifshitz-Liron, Revital; Lidor-Hadas, Rami
PATENT ASSIGNEE(S): Teva Pharmaceutical Industries Ltd., Israel; Teva Pharmaceuticals USA, Inc.
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003016317	A1	20030227	WO 2002-US26012	20020816
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2002099224	A1	20020725	US 2001-37412	20011024
US 6528661	B2	20030304		
CA 2450820	AA	20030227	CA 2002-2450820	20020816
US 2003114685	A1	20030619	US 2002-222556	20020816
US 6777552	B2	20040817		
EP 1425287	A1	20040609	EP 2002-759374	20020816
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
TR 200302281	T2	20040921	TR 2003-200302281	20020816
CN 1543468	A	20041103	CN 2002-815999	20020816
JP 2005500382	T2	20050106	JP 2003-521239	20020816
NZ 529913	A	20050324	NZ 2002-529913	20020816
ZA 2003009373	A	20041202	ZA 2003-9373	20031202
NO 2004001082	A	20040315	NO 2004-1082	20040315
US 2004176615	A1	20040909	US 2004-803414	20040318
US 2005197501	A1	20050908	US 2005-120567	20050502

PRIORITY APPLN. INFO.: US 2001-312812P P 20010816
US 2001-37412 A 20011024
US 2000-249319P P 20001116
US 2001-312144P P 20010813
US 2001-326529P P 20011001
US 2002-222556 A3 20020816
WO 2002-US26012 W 20020816

L9 ANSWER 11 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)
US 2004-803414 A1 20040318

OTHER SOURCE(S): MARPAT 138:204870
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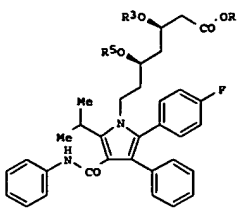
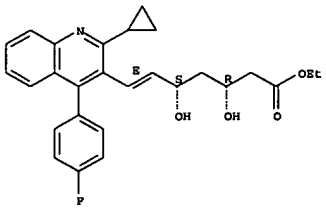


I

AB Processes for preparing hemicalcium salts of a statins RCH(OH)CH2CH(OH)CH2CO2H (R = statin organic radical selected from pravastatin, fluvastatin, cerivastatin, atorvastatin, rosuvastatin, pitavastatin, simvastatin, or lovastatin) from an ester derivative or protected ester derivative of the statin by using calcium hydroxide are provided. The ester or protected ester derivative is contacted with calcium hydroxide to obtain the calcium salt. Preferred statins are rosuvastatin, pitavastatin and atorvastatin, simvastatin and lovastatin. In processes beginning with a protected satin ester derivative, the protecting group is hydrolyzed during salt formation by contact with calcium hydroxide, or is contacted with an acid catalyst followed by contact with calcium hydroxide. Thus, diol-protected atorvastatin ester I (R = CMe3, R3R5 = CMe2) was treated with an 80% aqueous soln of AcOH at rt for 20 h to form the deprotected ester I (R = CMe3, R3 = R5 = H) which was in turn dissolved in EtOH, treated with a saturated soln of Ca(OH)2 containing Bu4N+Br- and stirred at 45° for 24 h to give atorvastatin hemicalcium salt I (R = 1/2Ca, R3 = R5 = H) in 77% yield for the two steps.
IT 167073-19-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(processes for preparing calcium salt forms of statins)
RN 167073-19-0 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, ethyl ester, (3R,5S,6E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

L9 ANSWER 11 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)

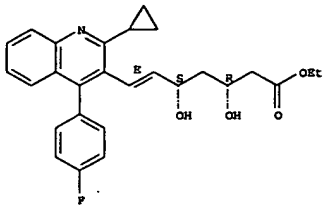


REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 12 OF 26 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 138:106481 CA
TITLE: Enantioselective addition of diketene to aldehydes promoted by Chiral Schiff base-titanium alkoxide complex. Application to asymmetric synthesis of potential inhibitors of HMG coenzyme reductase
AUTHOR(S): Hayashi, Masahiko; Yoshimoto, Kazuya; Hirata, Naohito; Tanaka, Kiyoshi; Oguni, Nobuki; Harada, Katsumasa; Matsushita, Akio; Kawachi, Yasuhiro; Sasaki, Hiroshi
CORPORATE SOURCE: Department of Chemistry, Faculty of Science, Kobe University, Kobe, 657-8501, Japan
SOURCE: Israel Journal of Chemistry (2002), Volume Date 2001, 41(4), 241-246
CODEN: ISJCAT; ISSN: 0021-2148
PUBLISHER: Laser Pages Publishing
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:106481
AB Highly enantioselective addition of diketene to aldehydes was achieved by using novel Schiff base-titanium alkoxide complexes. Up to 92% ee of 5-hydroxy-3-oxo esters was obtained. This procedure provides an efficient method for the asym. synthesis of potential inhibitors of HMG coenzyme reductase. Ligands included 2-(1,1-dimethylethyl)-6-[[[(1S)-1-(hydroxymethyl)-2-methylpropyl]imino]methyl]phenol (I), 2,4-bis(1,1-dimethylethyl)-6-[[[(1S)-1-(hydroxymethyl)-2-methylpropyl]imino]methyl]phenol, 2,4-bis(1,1-dimethylethyl)-6-[1-[[(1S)-1-(hydroxymethyl)-2-methylpropyl]imino]ethyl]phenol, 2-(1,1-dimethylethyl)-6-[[[(1S)-1-(hydroxymethyl)-2-methylpropyl]imino]methyl]-4-methylphenol (II), etc. For example, the addition of benzaldehyde to diketene in the presence of I and titanium tetraisopropoxide gave (δS)-δ-hydroxy-β-oxobenzenepentanoic acid 1-methylethyl ester in 62% yield and in 82% enantiomeric excess. Schiff base II was used as ligand in the reaction of diketene with (2E)-3-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-2-propenal to give (5S,6E)-7-[2-Cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-5-hydroxy-3-oxo-6-Heptenoic acid Et ester. This product was an intermediate in the synthesis of (4R,6S)-(4R,6S)-6-[(1E)-2-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]ethenyl]tetrahydro-4-hydroxy-2H-pyran-2-one (nisvastatin).
IT 167073-19-0P, (3R,5S,6E)-7-[2-Cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-6-heptenoic acid ethyl ester
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(stereoselective addition of diketene to aldehydes promoted by chiral Schiff base-titanium alkoxide complexes)
RN 167073-19-0 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, ethyl ester, (3R,5S,6E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

L9 ANSWER 12 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)



REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L9 ANSWER 13 OF 26 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 138:24649 CA
TITLE: Process for preparation of 2-cyclopropyl-4-(4-fluorophenyl)quinoline-3-carbaldehyde by ozonolysis of
ethyl (6E)-3,5-dihydroxy-7-[2-cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]hept-6-enoate
INVENTOR(S): Matsumoto, Hiroo; Shimizu, Takanori
PATENT ASSIGNEE(S): Daicel Chemical Industries, Ltd., Japan; Nissan Chemical Industries, Ltd.
SOURCE: PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002098859	A1	20021212	WO 2002-JP4712	20020515
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2448421	AA	20021212	CA 2002-2448421	20020515
EP 1391455	A1	20040225	EP 2002-776535	20020515
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
CN 1512984	A	20040714	CN 2002-810769	20020515
US 2004147750	A1	20040729	US 2003-479226	20031201
PRIORITY APPLN. INFO.:			JP 2001-162986 A	20010530
			JP 2001-208501 A	20010709
			WO 2002-JP4712 W	20020515

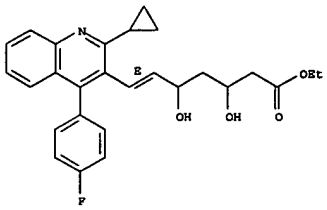
OTHER SOURCE(S): CASREACT 138:24649; MARPAT 138:24649
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Described is a process for preparing 2-cyclopropyl-4-(4-fluorophenyl)quinoline-3-carbaldehyde (I) which is important as an intermediate for the synthesis of drugs, i.e. HMG-CoA reductase inhibitor for cholesterol-lowering agent, efficiently from an unnecessary antipode, characterized by treating a compound represented by formula (II) or (III) (wherein A is -CHOH- or CO; and R is hydrogen, optionally branched C1-4

L9 ANSWER 13 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)
alkyl, Ph, an alkali metal ion, or an alk. earth metal ion) with ozone and
then conducting either redn. of the resulting compd. with an inorg. sulfur
compd. or hydrogenolysis of the resulting compd. Thus, a soln. of 5.0 g Et (6E)-3,5-dihydroxy-7-(2-cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]hept-6-enoate in 50 g MeOH was cooled to 0°, followed by introducing 1 g ozone(g) to the soln. at 0-5° over 1 h and removing excess ozone with N. To the resulting soln. was added dropwise a soln. of
0.85 g thiourea in 14.1 g H2O at 0-5° over 10 min, stirred at the same temp. for 1 h, treated with 26 g H2O, and stirred at 5° for 1 h to give, after filtering off pptd. crystals ad washing them with 6 g 50%
aq. MeOH, and drying them, 2.81 g I (86.7% yield and 99.2% purity).
IT 477950-34-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(process for preparation of 2-cyclopropyl-4-(4-fluorophenyl)quinoline-3-carbaldehyde as intermediate for HMG-CoA reductase inhibitor for cholesterol-lowering agent)
RN 477950-34-8 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, ethyl ester, (6E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L9 ANSWER 14 OF 26 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 137:310823 CA
TITLE: Method for preparing alkyl 7-quinolinyl-3,5-dihydroxyhept-6-enoate as intermediate for HMG-CoA reductase inhibitor
INVENTOR(S): Tokunaga, Kenichi; Kozawa, Masami; Suzuki, Kenji
PATENT ASSIGNEE(S): Nissan Chemical Industries, Ltd., Japan
SOURCE: PCT Int. Appl., 20 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002081451	A1	20021017	WO 2002-JP2779	20020322
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2442713	AA	20021017	CA 2002-2442713	20020322
EP 1375485	A1	20040102	EP 2002-707129	20020322
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
CN 1500079	A	20040526	CN 2002-807845	20020322
NZ 528149	A	20050527	NZ 2002-528149	20020322
RU 2260001	C2	20050910	RU 2003-132440	20020322
ZA 2003007704	A	20041004	ZA 2003-7704	20031002
NO 2003004438	A	20031003	NO 2003-4438	20031003
US 2005014947	A1	20050120	US 2003-473132	20031006
PRIORITY APPLN. INFO.:			JP 2001-106820 A	20010405
			WO 2002-JP2779 W	20020322

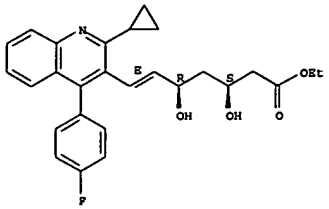
OTHER SOURCE(S): MARPAT 137:310823
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB This document discloses a method for preparing alkyl 7-quinolinyl-3,5-dihydroxyhept-6-enoate represented by the formula I (R represents an alkyl
group or an aryl group), characterized in that a compound represented by the
formula II (R is as defined above) , or a compound represented by the formula III (R is as defined above) is reduced by sodium borohydride in the presence of a boron compound represented by the formula R'OB(R'')2 (R'
and R''represent independently an alkyl group), and then the resulting reaction mixture is treated with an aqueous solution of hydrogen peroxide. (E)-I

L9 ANSWER 14 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)
(R = ethyl) was prepd. from (E)-II (R = ethyl) by the title method.
IT 147008-20-6DP, borane complex
RL: BYP (Byproduct); CPS (Chemical process); PEP (Physical, engineering or
chemical process); PREP (Preparation); PROC (Process)
(preparation of alkyl 7-quinolinyl-3,5-dihydroxyhept-6-enoate by stereoselective reduction of alkyl 7-quinolinyl-5-hydroxy-3-oxohept-6-enoate by sodium borohydride in presence of boron compound)
RN 147008-20-6 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, ethyl ester, (3R,5S,6E)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.
Double bond geometry as shown.



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

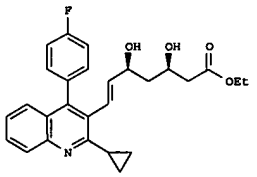
L9 ANSWER 15 OF 26 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 137:139496 CA
TITLE: Process for producing (3R,5S)-(E)-7-[2-cyclopropyl-4-(4-fluorophenyl)-quinolin-3-yl]-3,5-dihydroxyhept-6-enoic acid ester and derivatives
INVENTOR(S): Hara, Mari; Takuma, Yuki; Katsurada, Manabu; Hosokawa, Akemi; Matsumoto, Youichi; Kasuga, Yuzo; Watanabe, Naoyuki
PATENT ASSIGNEE(S): Mitsubishi Chemical Corporation, Japan; Nissan Chemical Industries, Ltd.
SOURCE: PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002063028	A1	20020815	WO 2002-JP835	20020201
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2003137870	A2	20030514	JP 2001-331480	20011029
CA 2437312	AA	20020815	CA 2002-2437312	20020201
JP 2002300897	A2	20021015	JP 2002-25423	20020201
EP 1365029	A1	20031126	EP 2002-710461	20020201
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
CN 1633502	A	20050629	CN 2002-807852	20020201
US 2004030139	A1	20040212	US 2003-629865	20030730
US 6965031	B2	20051115		

PRIORITY APPLN. INFO.: JP 2001-26316 A 20010202
JP 2001-331480 A 20011029
WO 2002-JP835 W 20020201

OTHER SOURCE(S): CASREACT 137:139496; MARPAT 137:139496
GI

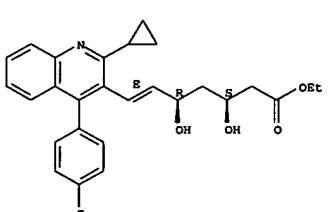
L9 ANSWER 15 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)



I

AB A process for producing the title compound (I) and optically active derivs.
with microorganism by fermentation was given. I is useful as serum cholesterol-reducing agent. Preparation of Et ester of I (3R,5S-DOLE) and its
derivs. 3S,5R-, 3S,5S-, and 3R,5R-DOLE with Saccharomycopsis fibuligera from S-Mol, i.e.
5-(E)-7-[2-cyclopropyl-4-(fluorophenyl)-quinolin-3-yl]-5-hydroxy-3-oxohepto-6-enoic acid Et ester was shown.
IT 167073-18-9P
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(process for producing (3R,5S)-(E)-7-[2-cyclopropyl-4-(4-fluorophenyl)-quinolin-3-yl]-3,5-dihydroxyhept-6-enoic acid ester and derivs.)
RN 167073-18-9 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, ethyl ester, (3S,5R,6E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L9 ANSWER 15 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)

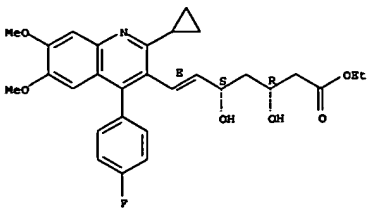
L9 ANSWER 16 OF 26 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 136:112193 CA
TITLE: Synthesis and biological evaluations of quinoline-based HMG-CoA reductase inhibitors
AUTHOR(S): Suzuki, M.; Iwasaki, H.; Fujikawa, Y.; Kitahara, M.; Sakashita, M.; Sakoda, R.
CORPORATE SOURCE: Central Research Laboratories, Nissan Chemical Industries, Ltd., Funabashi, Chiba, 274-8507, Japan
SOURCE: Bioorganic & Medicinal Chemistry (2001), 9(10), 2727-2743
CODEN: BMECEP; ISSN: 0968-0896
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 136:112193

AB A series of quinoline-based 3,5-dihydroxyheptenoic acid derivs. were synthesized from quinolinecarboxylic acid esters by homologation, aldol condensation with Et acetoacetate dianion, and reduction of 3-hydroxyketone to evaluate their ability to inhibit the enzyme HMG-CoA reductase in vitro. In agreement with previous literature, a strict structural requirement exists on the external ring, and 4-fluorophenyl is the most active in this system. For the central ring, substitution on positions 6, 7, and 8 of the central quinoline nucleus moderately affected the potency, whereas the alkyl side chain on the 2-position had a more pronounced influence on activity. Among the derivs., NK-104 (pitavastatin calcium), which has a cyclopropyl group as the alkyl side chain, showed the greatest potency. We found that further modulation and improvement in potency at inhibiting HMG-CoA reductase was obtained by having the optimal substituents flanking the desmethylmevalonic acid portion, i.e., 4-fluorophenyl and cyclopropyl, instead of the usual iso-Pr group.

IT 697234-82-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis and biol. evaluations of quinoline-based HMG-CoA reductase inhibitors)
RN 697234-82-5 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-6,7-dimethoxy-3-quinolinyl]-3,5-dihydroxy-, ethyl ester, (3R,5S,6E)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.
Double bond geometry as shown.

L9 ANSWER 16 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)

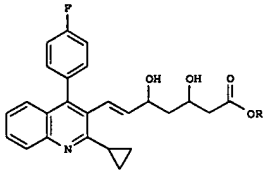


REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 17 OF 26 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 136:36497 CA
TITLE: Manufacture of (3R,5S,6E)-7-(substituted-quinolyl)-3,5-dihydroxyhept-6-enoic acid esters by stereoselective enzymic hydrolysis
INVENTOR(S): Tokuda, Shinichiro; Okabe, Toshiyuki; Soma, Tamotsu
PATENT ASSIGNEE(S): Nissan Chemical Industries, Ltd., Japan; Sankyo Kasei Kogyo K. K.
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001352996	A2	20011225	JP 2000-175316	20000612
PRIORITY APPLN. INFO.:			JP 2000-175316	20000612

OTHER SOURCE(S): MARPAT 136:36497
GI



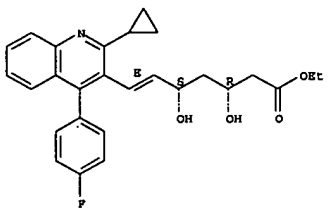
I

AB The compds. (3R,5S,6E)-I (R = C1-4 alkyl) (II), useful as intermediates for (3R,5S,6E)-7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolyl]-3,5-dihydroxyhept-6-enoic acid salts as hypolipemics and antiatherosclerotics, are manufactured by treating a mixture of stereoisomers of (6E)-I including II with acylating agents in the presence of hydrolases, removing the hydrolases from the reaction mixture, and then separating II from the mixture. A mixture (3.37 g) of II (R = Et) 49.7, (3S,5R,6E)-I (R = Et) 49.7, (3S,5S,6E)-I (R = Et) <0.3, and (3R,5R,6E)-I (R = Et) <0.3% was treated with isopropenyl acetate and Lipase PS in Me3COMe at 40° for 94 h to give 1.40 g II (R = Et) with 99.4% e.e.

IT 167073-19-0P
RL: PUR (Purification or recovery); PREP (Preparation)
(manufacture of optically-active quinolyldihydroxyheptenoic acid esters from stereoisomer mixts. using acylating agents and hydrolases)
RN 167073-19-0 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-

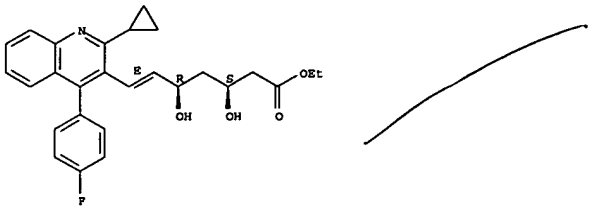
L9 ANSWER 17 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)
dihydroxy-, ethyl ester, (3R,5S,6E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L9 ANSWER 18 OF 26 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 132:93197 CA
TITLE: First systematic chiral syntheses of two pairs of enantiomers with 3,5-dihydroxyheptenoic acid chain, associated with a potent synthetic statin NK-104
AUTHOR(S): Suzuki, Mikio; Yanagawa, Yoshinobu; Iwasaki, Hiroshi; Kanda, Hiroyasu; Yanagihara, Kazufumi; Matsumoto, Hiroo; Ohara, Yoshio; Yazaki, Yukari; Sakoda, Ryozo
CORPORATE SOURCE: Central Research Institute, Nissan Chemical Industries Ltd., Chiba, 274-8507, Japan
SOURCE: Bioorganic & Medicinal Chemistry Letters (1999), 9(20), 2977-2982
CODEN: BMCLE8; ISSN: 0960-894X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 132:93197
AB All 4 enantiomers of the synthetic statin NK-104 were prepared The syn diol isomers (NK-104 and its enantiomer) were obtained efficiently by diastereomer resolution The anti diol isomers (3-epimer and 5-epimer) were prepared effectively by asym. aldol reaction followed by anti stereoselective reduction as key steps. Their purity detns. were effected by chiral HPLC anal.
IT 147008-20-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of the enantiomers of NK-104)
RN 147008-20-6 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, ethyl ester, (3R,5S,6E)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.
Double bond geometry as shown.



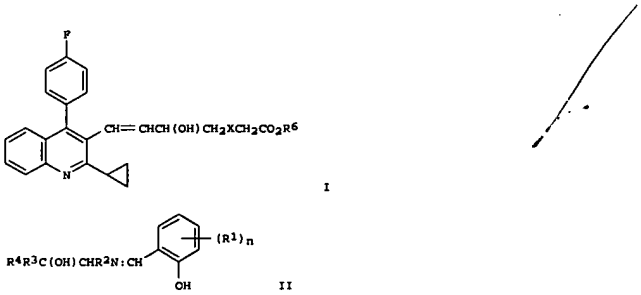
REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS

L9 ANSWER 18 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 19 OF 26 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 125:58345 CA
TITLE: Preparation of optically active quinolyldihydroxyheptenoates as intermediates for anticholesteremics
INVENTOR(S): Harada, Katsumasa; Matsushita, Akio; Sasaki, Hiroshi; Kawachi, Yasuhiro
PATENT ASSIGNEE(S): Ube Industries, Ltd., Japan; Ube Kosan KK; Nissan Chemical Industries Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08092217	A2	19960409	JP 1994-212958	19940906
JP 3554036	B2	20040811		
PRIORITY APPLN. INFO.:			JP 1994-212958	19940906

OTHER SOURCE(S): CASREACT 125:58345; MARPAT 125:58345
GI



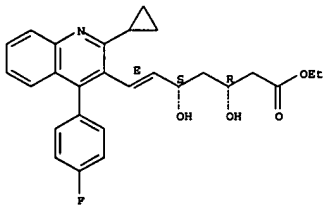
I

II

AB The title compds. I (R6 = alkyl, Ph; X = CHOH) are prepared by reaction of (E)-3-[2-cyclopropyl-4-(4-fluorophenyl)quinolin-3-yl]prop-2-en-1-al (III) with diketene in organic solvents in the presence of Ti complexes, prepared from optically active Schiff bases II (R1 = alkyl; R2 = H, alkyl, Ph; R3, R4 = H, alkyl; R2 = R3 = R4 = H; n = 0-4) and Ti(OR5)4 (R5 = alkyl, Ph), followed by syn-reduction of the optically active I (X = CO). III and diketene were added to a mixture of (S)-II (R1 = 3-CMe3, R2 = CHMe2,

L9 ANSWER 19 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)
H) and Ti(OEt)4 in CH2Cl2 and stirred at -50° for 62 h to give 72% (5S)-(E)-I (R6 = Et, X = CO) with 78% ee, redn. of which with NaBH4 and Me2BOMe in THF-MeOH at -75° for 3.5 h gave 88% (3R,5S)-(E)-I (R6 = Et, X = CHOH) (IV). IV was converted into (4R,6S)-(E)-6-[2-cyclopropyl-4-(4-fluorophenyl)quinolin-3-ylethenyl]-4-hydroxy-3,4,5,6-tetrahydro-2H-pyran-2-one in 89% yield and 78% ee.
IT 167073-19-0P
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of optically active quinolyldihydroxyheptenoates from quinolylpropenal and diketene by addition with Ti complexes and reduction)
RN 167073-19-0 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, ethyl ester, (3R,5S,6E)- (9CI) (CA INDEX NAME)

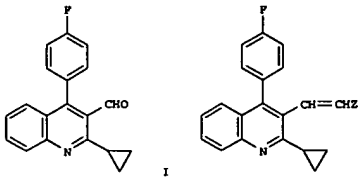
Absolute stereochemistry.
Double bond geometry as shown.

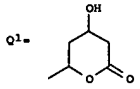


L9 ANSWER 20 OF 26 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 124:343135 CA
TITLE: Preparation of quinolinaldehyde derivative as intermediate for quinoline type mevalonolactones
INVENTOR(S): Matsumoto, Hiroo; Kanda, Hiroyasu; Ohara, Yoshio; Ikeda, Hirokazu; Murakami, Tatsufumi
PATENT ASSIGNEE(S): Daicel Kagaku Kogyo Kk, Japan; Nissan Kagaku Kogyo KK
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08003138	A2	19960109	JP 1995-35587	19950223
JP 3739432	B2	20060125		
PRIORITY APPLN. INFO.:			JP 1994-28596 A	19940225

OTHER SOURCE(S): MARPAT 124:343135
GI

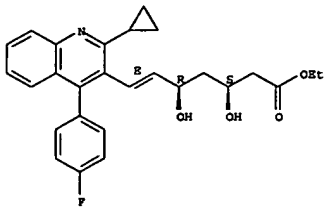




AB The title compound I is prepared by reaction of olefin II [Z = Q1, etc.] with ozone. Thus, a mixture of ozone and oxygen was introduced into II [Z = Q1] in ethanol and methanol at -60 to -72° during 1.5 h. Dimethylsulfide was then added to the reaction mixture at -72°; and the resulting mixture was warmed to room temperature during 1 h to give, after

L9 ANSWER 20 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)
workup, 29% I.
IT 167073-18-9P
RL: PUR (Purification or recovery); PREP (Preparation)
(preparation of quinolinaldehyde derivative as intermediate for quinoline type mevalonolactones)
RN 167073-18-9 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, ethyl ester, (3S,5R,6E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



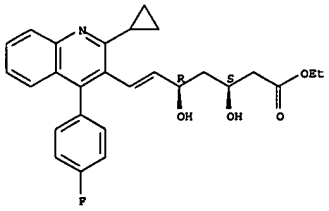
L9 ANSWER 21 OF 26 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 124:86587 CA
TITLE: Process for producing optically active aromatic mevalonolactone compounds
INVENTOR(S): Ikeda, Hirokazu; Murakami, Tatsushi; Matsumoto, Hiroo; Ohara, Yoshio; Kanda, Hiroyashu
PATENT ASSIGNEE(S): Daicel Chemical Industries, Ltd., Japan; Nissan Chemical Industries, Ltd.
SOURCE: PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9523125	A1	19950831	WO 1995-JP251	19950222
W: AU, CA, CN, CZ, FI, HU, JP, KR, MX, NO, NZ, RO, RU, SI, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2183071	AA	19950831	CA 1995-2183071	19950222
CA 2183071	C	20011218		
AU 9518231	A1	19950911	AU 1995-18231	19950222
AU 691582	B2	19980521		
EP 747341	A1	19961211	EP 1995-909953	19950222
EP 747341	B1	20020522		
R: AT, CH, DE, FR, GB, IT, LI, NL				
HU 74486	A2	19970128	HU 1996-2291	19950222
HU 214160	B	19980128		
AT 217859	E	20020615	AT 1995-909953	19950222
CN 1136182	B	20040128	CN 1995-191678	19950222
US 5939552	A	19990817	US 1996-700396	19960822
PRIORITY APPLN. INFO.:			JP 1994-28594 A	19940225
			WO 1995-JP251 W	19950222

AB A mevalonolactone compound is produced by batchwise chromatog. or pseudo-moving bed method both using a column filled with a packing material for optical resolution comprising a polysaccharide derivative The pseudo-moving bed method comprises jointing endlessly a number of columns to form a circulating flow path wherein a fluid is forcibly circulated in one direction, providing alternately along the direction of flow of the circulated fluid inlets for feeding the fluid into the column and outlets for drawing the fluid out of the column, moving intermittently the positions of the inlets and the outlets in the direction of flow of the circulated fluid, feeding a solution containing a racemate of a mevalonolactone compound and an eluent into a circulating path through the inlets, and drawing out simultaneously a solution enriched with nonadsorbates and a solution enriched with adsorbates through the outlets.
IT 172336-33-3
RL: ANT (Analyte); ANST (Analytical study)
(process for producing optically active mevalonolactone compound)
RN 172336-33-3 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-

L9 ANSWER 21 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)
dihydroxy-, ethyl ester, [R-(R*,S*)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).
Double bond geometry unknown.



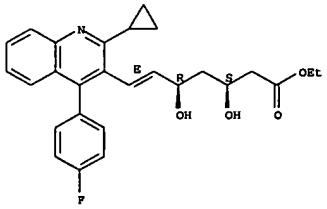
L9 ANSWER 22 OF 26 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 123:168993 CA
TITLE: Optically active β-aminoalkoxyborane complex as asymmetric reducing agent
INVENTOR(S): Kashihara, Hiroshi; Suzuki, Mikio; Ohara, Yoshio
PATENT ASSIGNEE(S): Nissan Chemical Industries Ltd., Japan
SOURCE: PCT Int. Appl., 91 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9417079	A1	19940804	WO 1994-JP56	19940117
W: AU, CA, CN, CZ, FI, HU, KR, NO, NZ, RO, RU, UA, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
JP 06329679	A2	19941129	JP 1993-332498	19931227
TW 383309	B	20000301	TW 1994-83100279	19940114
CA 2153695	AA	19940804	CA 1994-2153695	19940117
AU 9458431	A1	19940815	AU 1994-58431	19940117
AU 678427	B2	19970529		
EP 680484	A1	19951108	EP 1994-904332	19940117
EP 680484	B1	19980819		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
CN 1116850	A	19960214	CN 1994-190966	19940117
CN 1047173	B	19991208		
HU 72018	A2	19960328	HU 1995-2184	19940117
HU 217182	B	19991228		
AT 169921	E	19980915	AT 1994-904332	19940117
RU 2126412	C1	19990220	RU 1995-115845	19940117
ZA 9400383	A	19940907	ZA 1994-383	19940119
IL 108387	A1	20000629	IL 1994-108387	19940120
NO 9502870	A	19950919	NO 1995-2870	19950719
NO 305602	B1	19990628		
US 5663348	A	19970902	US 1995-481505	19950719
US 5767277	A	19980616	US 1997-779621	19970107
US 5739347	A	19980414	US 1997-848173	19970429
US 5786485	A	19980728	US 1997-848172	19970429
US 5808098	A	19980915	US 1997-848169	19970429
US 5852221	A	19981222	US 1997-848174	19970429
NO 9805016	A	19950919	NO 1998-5016	19981028
CN 1234392	A	19991110	CN 1999-105088	19990409

PRIORITY APPLN. INFO.: JP 1993-7827 A 19930120
JP 1993-66825 A 19930325
WO 1994-JP56 W 19940117
US 1995-481505 A3 19950719

OTHER SOURCE(S): CASREACT 123:168993; MARPAT 123:168993
GI

L9 ANSWER 22 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)



L9 ANSWER 22 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Optically active β-aminoalkoxyborane complexes are disclosed, specifically I [R1 = C1-C8 alkyl, C3-C7 cycloalkyl, C7-C11 aralkyl or C6-C10 aryl; R2 = H, C1-C8 alkyl, C3-C7 cycloalkyl or C7-C11 aralkyl; or R1R2 = (CH2)n wherein n = 3 or 4; Ar = naphthyl, anthryl or phenanthryl, which may be substituted by 1-3 substituents selected from halo, nitro, C1-C6 alkyl, C3-C7 cycloalkyl, C2-C6 alkenyl or alkynyl, C7-C11 aralkyl, C6-C10 aryl, C1-C6 alkoxy, and styrene polymer substituents]. The complexes are useful for reducing carbonyl compds. to optically active alcs., and especially for reducing 1,3-dicarbonyl compds. to optically active 1,3-syn-diols. For example, reduction of proline Et ester with LiAlH4 to give (S)-prolinol, cyclocondensation of this with β-naphthaldehyde to give an oxazolidine derivative (quant.), reduction of this with NaBH4 to give an amino alc. (quant.), and reaction of the latter with BH3.THF (quant.), gave the (S)-isomeric complex II. Reduction of diketo ester III using II and Et2BOMe in THF at 20° gave the (3S,5R)-syn-diol IV in 53% yield and 100% enantiomeric excess (ee). In contrast, several similar known borane complexes gave 28-78% yield but only 6-23% ee.

IT 167073-18-9P, (3S,5R,E)-Ethyl 7-[2-cyclopropyl-4-(p-fluorophenyl)quinolin-3-yl]-3,5-dihydroxy-6-heptenoate
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(reduction product; preparation of optically active β-aminoalkoxyborane complexes for asym. reduction of (di)carbonyl compds.)

RN 167073-18-9 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, ethyl ester, (3S,5R,6E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

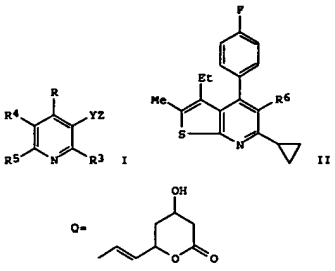
L9 ANSWER 23 OF 26 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 119:117112 CA
TITLE: Preparation of (heterocyclylvinyl)mevalonic lactone analogs as antiatherosclerotics
INVENTOR(S): Saito, Yasushi; Kitahara, Masaki; Sakashita, Mitsuaki;
Toyoda, Kyomi; Shibazaki, Toshie
PATENT ASSIGNEE(S): Nissan Chemical Industries, Ltd., Japan; Kowa Co., Ltd.
SOURCE: Eur. Pat. Appl., 64 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 535548	A1	19930407	EP 1992-116417	19920924
EP 535548	B1	20011121		
R: AT, BE, CH, DE, DK, FR, GB, IE, IT, LI, LU, NL, SE				
JP 06329540	A2	19941129	JP 1991-257870	19911004
JP 3130342	B2	20010131		
AT 209035	E	20011215	AT 1992-116417	19920924
AU 9226012	A1	19930408	AU 1992-26012	19920928
AU 652669	B2	19940901		
NZ 244555	A	20000623	NZ 1992-244555	19920930
US 6162798	A	20001219	US 1992-953716	19920930
NO 9203858	A	19930405	NO 1992-3858	19921002
NO 302452	B1	19980309		
CA 2079706	AA	19930415	CA 1992-2079706	19921002
CA 2079706	C	20040330		
HU 62794	A2	19930628	HU 1992-3138	19921002
HU 214624	B	19980428		
CZ 281786	B6	19970115	CZ 1992-3027	19921002
RU 2114620	C1	19980710	RU 1992-5052949	19921002
SK 279277	B6	19980909	SK 1992-3027	19921002

PRIORITY APPLN. INFO.: JP 1991-257870 A 19911004

OTHER SOURCE(S): MARPAT 119:117112
GI

L9 ANSWER 23 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)



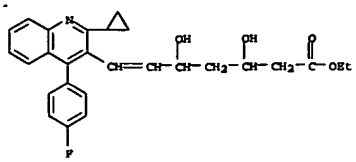
AB Title compds. [I; R = substituted-Ph; R3 = H, (cyclo)alkyl, (cyclo)alkenyl, (substituted)Ph, etc.; R4R5 = atoms to complete a fused benzene or 5- or 6-membered heteroaryl ring; Y = CH2, CH2CH2, CH:CH, etc.; Z = 4-hydroxy-2-oxo- or 2,4-dioxo-6-tetrahydropyranyl, QCH2WCH2CO2R12, etc.; Q = CO, CH(OH), etc.; R12 = H, ammonium, physiol. labile ester residue, etc.; W = CO, CH(OH), etc.], inhibitors of atherosclerotic intimal thickening, were prepared Thus, thienopyridinecarboxyaldehyde II (R6 = CHO) was condensed with Bu3SnC(OEt):CH2 and the product hydrolyzed to give II [R6 = (E)-CH:CHCHO] which was condensed with MeCOCH2CO2Et to give, in 3 addnl. steps, II (R6 = oxopyranylvinyl group Q). The latter gave 100% inhibition of smooth muscle cell proliferation at 10-6 M (intimal) and 10-5 M (medial) in vitro.

IT 121661-13-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, in preparation of antiatherosclerotic)

RN 121661-13-0 CA

CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, ethyl ester (9CI) (CA INDEX NAME)

L9 ANSWER 23 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)



L9 ANSWER 24 OF 26 CA COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 118:233897 CA

TITLE: Preparation of diastereomer salt of optically active quinolinemevalonic acid

INVENTOR(S): Ohara, Yoshio; Suzuki, Mikio; Yanagawa, Yoshinobu; Iwasaki, Hiroshi; Miyachi, Nobuhide

PATENT ASSIGNEE(S): Nissan Chemical Industries, Ltd., Japan

SOURCE: Eur. Pat. Appl., 15 pp.
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

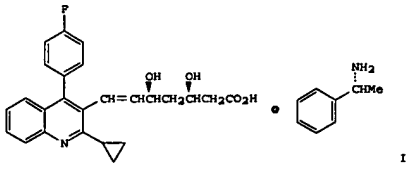
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 520406	A1	19921230	EP 1992-110636	19920624
EP 520406	B1	19980902		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, PT, SE				
JP 05148237	A2	19930615	JP 1992-127277	19920520
JP 3528186	B2	20040517		
CA 2072162	AA	19921225	CA 1992-2072162	19920623
CA 2072162	C	20021119		
US 5284953	A	19940208	US 1992-902863	19920623
EP 742209	A2	19961113	EP 1996-107815	19920624
EP 742209	A3	19970514		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, PT, SE				
AT 170513	E	19980915	AT 1992-110636	19920624
ES 2120973	T3	19981116	ES 1992-110636	19920624
KR 208867	B1	19990715	KR 1992-11018	19920624
US 5473075	A	19951205	US 1993-123117	19930920
US 5514804	A	19960507	US 1995-450383	19950525

PRIORITY APPLN. INFO.: JP 1991-151810 A 19910624
JP 1992-127277 A 19920520
US 1992-902863 A3 19920623
EP 1992-110636 A3 19920624
US 1993-123117 A3 19930920

GI



I

L9 ANSWER 24 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)

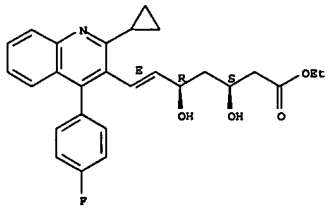
AB A diastereomer salt of the title compound (I) which is an intermediate for preparation of optically active quinolinemevalonic acid derivs. with known. biol. activity is prepared by resolution of its racemic parent. Et (±)-(E)-3,5-dihydroxy-7-[4-(4-fluorophenyl)-2-cyclopropyl-3-quinolinyl]-6-heptenoate in EtOH was added to 1N NaOH to give the free acid. To the CH2Cl2 solution of the free acid 1 equiv of D-(+)-PhCH(NH2)Me was added to give the (E)-(3R,5S)-I.

IT 147008-20-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(saponification of)

RN 147008-20-6 CA

CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, ethyl ester, (3R,5S,6E)-rel- (9CI) (CA INDEX NAME)

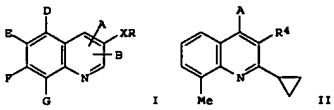
Relative stereochemistry.
Double bond geometry as shown.



L9 ANSWER 25 OF 26 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 114:82195 CA
TITLE: Preparation of 5-[3-(quinolinyl)vinyl- or ethyl]mevalonates as HMG-CoA reductase inhibitors
INVENTOR(S): Philippa, Thomas; Angerbauer, Rolf; Fey, Peter; Huebsch, Walter; Bischoff, Hilmar; Petzinna, Dieter; Schmidt, Delf
PATENT ASSIGNEE(S): Bayer A.-G., Germany
SOURCE: Ger. Offen., 28 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

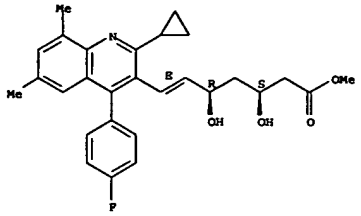
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3905908	A1	19900906	DE 1989-3905908	19890225
PRIORITY APPLN. INFO.:			DE 1989-3905908	19890225

OTHER SOURCE(S): CASREACT 114:82195; MARPAT 114:82195
GI



AB The title compds. [I; A = (un)substituted heterocyclyl, aryl, alkyl; B = cycloalkyl, (un)substituted alkyl, aryl; D = H, alkyl; E, F, G = H, halo, alkyl; R = CH(OH)CH2CR1(OH)CH2CO2R2 or δ-lactone form thereof; R1 = H, alkyl; R2 = H, alkyl, aryl, cation; X = CH2CH2, CH:CH] were prepared Thus, 2-amino-4'-fluoro-3-methylbenzophenone (preparation given) was cyclocondensed with R3COCH2CO2Me (R3 = cyclopropyl) to give quinolinecarboxylate II (A = 4-FC6H4)(III; R4 = CO2Me) which was converted in 2 steps to III (R4 = CHO). The latter was condensed with (EtO)2P(O)CH:CHNHR5 (R5 = cyclohexyl) and the product [III; (E)-CH:CHCHO] condensed with MeCOCH2CO2Me to give, after reduction, III [R4 = (E)-CH:CHCH(OH)CH2CH(OH)CH2CO2Me] which was 53 times as potent as mevinolin in inhibition of 3-hydroxy-3-methylglutaryl-CoA (HMG-CoA) reductase in vitro.
IT 131775-33-2
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent)
(HMG-CoA reductase inhibitor activity of)
RN 131775-33-2 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-6,8-dimethyl-3-quinolinyl]-3,5-dihydroxy-, methyl ester, [R*,S*-(E)]- (9CI) (CA INDEX NAME)

Relative stereochemistry.
Double bond geometry as shown.



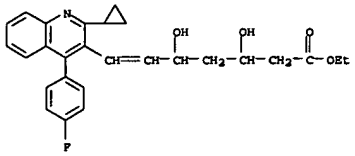
L9 ANSWER 26 OF 26 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 111:134010 CA
TITLE: Quinolinylheptenoic acid derivatives as anticholesteremics, their preparation, and formulations containing them
INVENTOR(S): Fujikawa, Yoshihiro; Suzuki, Mikio; Iwasaki, Hiroshi; Sakashita, Mitsuaki; Kitahara, Masaki
PATENT ASSIGNEE(S): Nissan Chemical Industries, Ltd., Japan
SOURCE: Eur. Pat. Appl., 46 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 304063	A2	19890222	EP 1988-113448	19880818
EP 304063	A3	19901003		
EP 304063	B1	19941130		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 01279866	A2	19891110	JP 1988-193606	19880803
JP 2569746	B2	19970108		
CA 1336714	A1	19950815	CA 1988-574999	19880817
ES 2067460	T3	19950401	ES 1988-113448	19880818
US 5011930	A	19910430	US 1990-483720	19900223
US 5102888	A	19920407	US 1990-483724	19900223
US 5185328	A	19930209	US 1990-483829	19900223
US 5872130	A	19990216	US 1990-631092	19901219
US 5856336	A	19990105	US 1992-883398	19920515
US 5854259	A	19981229	US 1992-978884	19921119
PRIORITY APPLN. INFO.:			JP 1987-207224 A	19870820
			JP 1988-15585 A	19880126
			JP 1988-193606 A	19880803
			US 1988-233752 A3	19880819
			US 1990-631092 A3	19901219
			US 1992-883398 A3	19920515

OTHER SOURCE(S): MARPAT 111:134010
GI For diagram(s), see printed CA Issue.
AB The title compds. I [R1-R4, R6 = H, C1-6 alkyl, C3-6 cycloalkyl, C1-3 alkoxy, etc.; or R1 and R2, R3 and R4 may form CH:CHCH:CH, etc.; Y = CH2, CH2CH2, CH:CH, CH2CH:CH, CH:CHCH2; Z = QCH2WCH2CO2R12, Q1, etc.; Q = C(O), CH(OH), etc.; W = C(O), C(R11)(OH), etc.; R11 = H, C1-6 alkyl; R12 = H, R14; R14 = physiol. hydrolyzable alkyl, M; M = NH4, Na, K, etc.; R5 = H, C1-6 alkyl, C2-3 alkenyl, C3-6 cycloalkyl, etc.], useful as cholesterol biosynthesis inhibitors, were prepared Reduction of Et (E)-7-[4'-(4''-fluorophenyl)-2'-(1'''-methylethyl)quinolin-3'-yl]-5-hydroxy-3-oxohept-6-enoate (preparation given) with NaBH4, followed by saponification in 0.5N NaOH, gave

(E)-3,5-dihydroxy-7-[4'-(4''-fluorophenyl)-2'-(1'''-methylethyl)-quinolin-3'-yl]-hept-6-enoic acid Na salt (II). II exhibited an IC50 of 1.0 + 10-8M against cholesterol biosynthesis from acetate in vitro. A

L9 ANSWER 26 OF 26 CA COPYRIGHT 2006 ACS on STN (Continued)
capsule formulation contg. II 1, lactose 3.5, cellulose 10, Mg stearate 0.5 g is given.
IT 121661-13-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as cholesterol biosynthesis inhibitor)
RN 121661-13-0 CA
CN 6-Heptenoic acid, 7-[2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl]-3,5-dihydroxy-, ethyl ester (9CI) (CA INDEX NAME)



```
=> d his

     (FILE 'HOME' ENTERED AT 14:33:52 ON 08 MAR 2006)

     FILE 'REGISTRY' ENTERED AT 14:34:02 ON 08 MAR 2006
L1              STRUCTURE UPLOADED
L2            2 S L1 SAM
L3           24 S L1 FULL

     FILE 'CA' ENTERED AT 14:34:31 ON 08 MAR 2006
L4           32 S L3
L5        83200 S LIQUID CHROMATOGRAPH?
L6            4 S L4 AND L5
L7            3 S L4 AND RESOLV?
L8            6 S L6 OR L7
L9           26 S L4 NOT L8

=>

---Logging off of STN---


=>
Executing the logoff script...


=> LOG Y

STN INTERNATIONAL LOGOFF AT 14:35:46 ON 08 MAR 2006
```